

“FIG. 1a is a prior art schematic block diagram of a model of ganglion cell response.”

**In the Figures:**

Please add the referenced FIG. 1 of Dahari and Spitzer (mentioned on Page 11, line 17 of the specification and attached herein) as FIG. 1a (prior art).

**In the Claims:**

1. (Amended) A method for correcting the color contrast of a scene, the scene including an intensity spectrum at each of a plurality of pixels, the method comprising the steps of:

a) providing a red image, a green image, and a blue image, each image having a pixel value at each of the plurality of pixels;

b) computing a center red response, a center green response and a center blue response based on said images;

c) computing a surround red response, a surround green response and a surround yellow response based on said images;

d) computing a red, a green and a blue on-center opponent and filtered opponent response, based on said center and surround responses;

e) computing a red, a green and a yellow off-center opponent and filtered opponent response based on said center and surround responses;

f) computing a red, a green and a blue double-opponent response (do-response) and a corresponding filtered double-opponent response based on said on-center and off-center filtered opponent responses;

g) computing a red, a green and a blue do-remote response [signal] based on a set of responses selected from the group consisting of said on-center filtered opponent responses and said filtered double-opponent responses; and

h) for each pixel: correcting each of said red, green, and blue double-opponent responses for color contrast using respectively said red, green and blue do-remote response [signals], thereby producing corrected red, green and blue double-opponent responses .

9. (Amended) The method of claim 7 [1], wherein said step of computing each said double-opponent surround response includes convolving a surround filtered response with a surround spatial weight function.

14. (Amended) The method of claim 2 [1], wherein said step of correcting each of said red, green, and blue double-opponent responses for color contrast includes the steps of: for each said double-opponent response

a) computing a respective adaptive function  $G_b$ ; and

b) computing a respective adaptation factor, based on said respective adaptive function.

29. (Amended) The method of claim 28, wherein said inversely transforming includes transforming said new center [double-opponent cell] responses into new opponent cell responses.

31. (Cancelled)

32. (Cancelled)

33. (Amended) A method for adjusting an achromatic contrast of a scene, the scene including an intensity spectrum at each of a plurality of pixels, the method comprising the steps of:

a) providing an image that has an intensity value at each of the plurality of pixels;

b) obtaining an adapted opponent center response using a plurality of said pixel intensity values by:

i) calculating an opponent center response;

ii) providing a center adaptation factor that includes a remote center adaptation term, and

iii) combining said opponent center response and said center adaptation factor; and

c) at each pixel, correcting the achromatic contrast using said adapted opponent center response.

35. (Amended) The method of claim 33 [32], further comprising obtaining an adapted opponent surround response, wherein said step of correcting for achromatic [intensity] contrast includes subtracting said adapted opponent surround response from said adapted opponent center response.

39. (Amended) The method of claim 33 [31], wherein said step of providing pixel intensity values includes: at each pixel: i) multiplying the intensity spectrum by a spectral response function, thereby providing a spectral product; and ii) integrating said spectral product.